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AND HEALTH STANDARDS BOARD**

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Attachment No. 2

**INITIAL STATEMENT OF REASONS****CALIFORNIA CODE OF REGULATIONS**

TITLE 8: Chapter 4, Subchapter 7, Group 4, Article 24, Sections 3637, 3638, 3639, 3640, 3642, and 3646 of the General Industry Safety Orders.

**Mast-Climbing Work Platforms****SUMMARY**

Over the past several years, there has been constant growth in the use of mast-climbing work platforms (MCWP's) throughout California. These devices have found numerous applications in the construction and entertainment industries. There have been serious work-related injuries resulting from the misuse of these devices, including worker falls from elevated platforms, and structural failure and collapse of platforms.

This rulemaking action is the result of requests by the Division of Occupational Safety and Health (Division) to amend standards for elevating work platforms and aerial devices to clearly include mast-climbing work platforms among elevating work platforms regulated in General Industry Safety Orders (GISO) Article 24. The Division initially submitted a Priority 2 Request For New, Or Change In Existing, Safety Order (Form 9), dated October 25, 2000. Subsequently, due to serious work-related injuries resulting from increasing use and misuse of these devices, the Division upgraded the request to Priority 1 via a supplemental request dated May 14, 2003.

An ad hoc advisory committee, consisting of members from management, labor, equipment manufacturers, equipment rental, and other interested parties, was convened on October 1, 2003. This proposal is based in large part on a consensus proposal developed with the assistance of the committee.

**SPECIFIC PURPOSE AND FACTUAL BASIS OF PROPOSED ACTION****Section 3637. Definitions.**

"Elevating Work Platform." The standard presently defines "elevating work platform" as "A device designed to elevate a platform in a substantially vertical axis." The definition lists vertical towers and scissor lifts as examples. It is proposed to clarify that the definition of "elevating work platform" includes MCWP's by adding them to the list of examples. The purpose and necessity for this modification is to clarify that MCWP's are covered under GISO Article 24.

“Mast-Climbing Work Platform.” Section 3637 definitions do not presently include a definition for “mast-climbing work platform.” It is proposed to add a definition for mast-climbing work platform as “a powered elevating work platform or platforms, supported on one or more vertical masts, for the purpose of positioning personnel, along with necessary tools and materials, to perform their work.” The purpose and necessity for this addition is to clarify the scope of Article 24 for the regulated public.

Section 3638. Equipment Instructions and Marking.

It is proposed to rename this section “General Requirements” to more accurately indicate the contents. While this section currently contains provisions for equipment instructions and marking, it is not limited to those subjects. It also contains other provisions for training, assembly, maintenance, and operation. The purpose and necessity for the proposed renaming will be to assist the regulated public in locating applicable provisions for elevating work platforms and aerial devices, including MCWP’s.

Subsection (a).

Existing subsection (a) requires that each aerial device and elevating work platform have a manual containing instructions for maintenance and operations, but does not specify where the manual is to be located. A new subsection (a)(1) is proposed to clarify that the required manual or manuals are to be maintained in a weather resistant storage location on the elevating work platform or aerial device. The purpose of this amendment is to clarify that required maintenance and operating instructions are to be readily available for those operating the device and that they are to be protected from the elements. This is necessary because without this clarification it is unclear whether the instruction manual must be available on the device or whether it could be maintained in an off-site office not readily available to the operator.

Subsections (b)(1) and (b)(2).

Existing subsections (b)(1) and (b)(2) prescribe that aerial devices are to be conspicuously and legibly marked with verification that the device has been designed and manufactured in accordance with applicable ANSI standards. It is proposed to add verbiage to both subsections (b)(1) and (b)(2) to clarify that this provision also applies to elevating work platforms. The purpose and necessity of this modification, coupled with modified definition, will be to clarify that marking requirements for aerial devices include elevating work platforms and MCWP’s.

Existing subsections (b)(1) and (b)(2) do not list a national consensus standard applicable for MCWP’s. It is proposed to add American National Standards Institute/Scaffold Industry Association (ANSI/SIA) Standard A92.9-1993 to the list of standards. The purpose and necessity for this amendment is to clarify standards applicable for the design and manufacture of MCWP’s.

Subsection (c)(2).

Existing subsections (c)(2) and (c)(2)(A) prescribe instructions and markings to identify device capacity. It is proposed to combine (c)(2) and (c)(2)(A) into a single subsection (c)(2) since existing subsection (c)(2)(A) requires information not required by national consensus standards and which could be misinterpreted to permit devices to be operated beyond the manufacturer’s

rated limits. The purpose for this modification is to promote safe operation of these devices by clarifying capacity and the necessity is to conform Title 8 with national consensus standards.

Subsection (c)(3).

Existing subsection (c)(3) and (c)(3)(A) prescribe instructions and markings to identify device travel height. It is proposed to combine (c)(3) and (c)(3)(A) into a single subsection (c)(3) since existing subsection(c)(3) is vague and is only clarified in the context of (c)(3)(A). The purpose for this modification is to clarify requirements for instructions and markings for platform travel height, and the necessity is for consistency with national consensus standards.

Subsection (c)(5).

Existing subsection (c)(5) requires plates or markings to identify cautions or restrictions of operation or both. It is proposed to clarify that these are to be basic cautions or restrictions. The purpose for this provision is to permit manufacturers to include a statement on the device to direct the operator to the operating instructions located in a weather resistant storage location on the device for a complete listing of cautions or restrictions. The necessity for this modification is twofold: (1) members of the advisory committee were concerned the existing standard could be misinterpreted to require a complete listing of all the cautions and restrictions and that there would be insufficient room to place this information on a plate, and (2) this will conform the standard with similar requirements in national consensus standards.

Subsection (c)(6).

Existing subsection (c)(6) requires plates or markings to contain operating instructions. It is proposed to clarify that these are to be basic operating instructions. Since subsection (a) will require that operating instructions be maintained in a weather resistant storage location on the device, the purpose of this provision for basic operating instructions will be to permit manufacturers to direct users to those operating instructions. The necessity for this modification is twofold: (1) members of the advisory committee were concerned the existing standard could be misinterpreted to require complete operating instructions and that there would be insufficient room for all the operating instructions to be posted on a plate, and (2) this will conform the standard with similar requirements in national consensus standards.

Subsection (c)(7).

Existing subsection (c)(7) requires plates or markings to identify the “manufacturer’s rated line voltage (dielectric capability).” The requirement for dielectric capability is not listed in most applicable national consensus standards for aerial devices and elevating work platforms and would only apply to a very limited number of devices. It is proposed to modify this to read: “Rated line voltage (if applicable).” MCWP’s and other aerial devices are often powered by other than electricity, and the purpose of this modification is require rated line voltage information only if applicable. The necessity for this modification is to clarify and conform the standard with similar requirements in national consensus standards.

Subsection (c)(8).

The existing subsections prescribe information to be provided if the aerial device or elevating work platform is capable of being configured in more than one arrangement. Since MCWP's are modular in nature, there are many possible combinations of powered units and outriggers and it is not feasible to list all the possible configurations on the information plate. The advisory committee consensus was that an exception should be provided for MCWP's, the purpose of which is to direct the user to the readily available operating instructions for information needed to determine capacities, cautions and restrictions based on the various possible configurations. The necessity for this modification is to conform the standard with national consensus standards for MCWP's.

Subsection (d).

The existing subsection provides that employees shall be instructed in the proper use of the platform, but does not provide any criteria for the instruction. It is proposed to modify this subsection to add that the instruction shall be in accordance with the manufacturer's operating instructions and Section 3203 (Injury and Illness Prevention Program). The purpose of this modification is to provide criteria for training, and the necessity is to clarify training requirements.

Subsection (e).

The existing subsection provides that all aerial devices and elevating work platforms shall be assembled and erected in accordance with Article 24 and shall be maintained in safe operating condition. It is proposed to modify this subsection to require that assembly and erection be done by a qualified person and in accordance with the manufacturer's specifications. The purpose of this modification is to assure that the device is properly positioned, assembled, and braced by a qualified person, who is knowledgeable in the structural limitations of the device, in accordance with detailed criteria established by the manufacturer. This modification is necessary as accidents have resulted from failure to follow the manufacturer's installation instructions and/or from improper installation by unqualified personnel.

Subsection (e)(1).

This new subsection is proposed to provide for situations where the device manufacturer is no longer in business and where assembly instructions are no longer available. In this situation, it is proposed to provide that assembly and erection may be conducted by a qualified person under the direction of a qualified engineer. The purpose of this amendment is to permit the continued use of existing elevating work platforms where the manufacturer is no longer in business and where the manufacturer's instructions are no longer available, provided they are properly installed by qualified personnel in accordance with good engineering practice. This modification is necessary to provide criteria to assure safe installation of older devices where the manufacturer is no longer in business.

Subsection (f).

The existing subsection refers to High Voltage Electrical Safety Orders (HVESO) Article 37 for work using aerial devices in proximity to energized high voltage power lines. The existing verbiage is unclear as to whether it is regulatory or advisory in nature. Therefore, it is proposed to clarify this subsection by using regulatory language ("shall be") and to include elevating work

platforms in the scope of this provision. A note is also proposed to cover work in proximity to energized low voltage power lines. The purpose of these modifications is to clarify that work performed when using elevating work platforms or aerial devices in proximity to energized power lines shall be in accordance with applicable parts of the Electrical Safety Orders. The necessity is to prevent accidents by providing clear guidance regarding safe working clearances from energized electrical conductors.

#### Section 3639. Factors of Safety in Design of Work Platform Assembly.

##### Subsection (a).

The existing subsection provides that where a platform supports its work load by a system of wire ropes or lift chains, or both, the safety factor for the wire ropes and/or lift chains shall be not less than 6 to 1. A modification is proposed to increase the factor of safety to 8 to 1 for consistency with national consensus standards. The purpose and necessity for this modification is to conform Title 8 with national consensus standards for aerial devices and elevating work platforms.

#### Section 3640. Maintenance and Repairs.

This section currently contains provisions for maintenance and repairs; however, provisions for inspection have been added for consistency with national consensus standards. Therefore, it is proposed to amend the title of this section to read “Inspection, Maintenance and Repairs” to more accurately indicate the contents. The purpose of the proposed renaming is to assist the regulated public in locating applicable provisions for inspection, maintenance and repairs for aerial devices and elevating work platforms, including MCWP’s. The necessity for adding requirements for inspection is for conformity with national consensus standards.

##### Subsection (a).

The existing subsection (a) provides that the materials used in the repair of aerial devices and elevating work platforms shall conform to standard specifications of strength, dimensions, and weights, and shall be selected to safely support the rated work load. It is proposed to renumber this subsection to (a)(3) and insert two new subsections (1) and (2) under a new subsection (a) which is proposed to be titled “Inspection, Maintenance and Repairs.”

The purpose of titling subsection (a) is to clarify the location of requirements for inspection, maintenance and repairs of aerial devices and elevating work platforms. This is necessary to assure that equipment is properly inspected, maintained and repaired.

##### Subsection (a)(1).

This new subsection provides that inspection, maintenance and repairs shall be performed by a qualified person in accordance with the manufacturer’s specifications. The purpose for this amendment is to clarify qualifications and criteria for individuals performing inspection, maintenance and repairs. The necessity is to prevent accidents caused by improper inspection, maintenance and repairs of aerial devices and elevating work platforms.

Subsection (a)(2).

This new subsection prescribes criteria for inspection, maintenance and repair of aerial devices and elevating work platforms where the manufacturer has gone out of business and where the manufacturer's specifications are no longer available. The purpose for this amendment is to clarify requirements for inspection, maintenance and repair of equipment where the manufacturer has gone out of business and the manufacturer's specifications are no longer available. The necessity is to prevent accidents caused by lack of criteria for inspection, maintenance and repairs of aerial devices and elevating work platforms where the manufacturer is no longer in business.

Subsection (a)(3).

As noted above, this subsection contains the text of existing subsection (a) which is proposed to be relocated as part of a restructuring to clarify requirements for inspection, maintenance and repairs.

Subsection (d).

This new subsection prescribes record keeping requirements for inspections and repairs accomplished on aerial devices and elevating work platforms. The purpose of this amendment is to ensure the documentation of required inspections and repairs and to require that the records be preserved for a period of at least three years to be available for inspectors, maintenance personnel and compliance officers. The necessity is to assure that aerial devices and elevating work platforms are kept in safe operating condition.

Subsections (d)(1) and (d)(2).

These two new subsections require records of inspections and repairs to be maintained for at least three years and prescribe the content of the required records, including dates of inspection, deficiencies found, corrective actions recommended, repairs accomplished, and identification of the persons or entities performing the work. The purpose of these amendments will be to improve worker safety by prescribing the contents of records to ensure that aerial devices and elevating work platforms are regularly inspected and repairs are performed as needed. The necessity is to require that critical information is documented to assure proper maintenance of aerial devices and elevating work platforms.

Section 3642. Elevating Work Platform Equipment.

Subsection (a)(1).

The existing subsection (a) requires elevating work platforms to be equipped with guardrails or other means of fall protection. Since MCWP's are commonly used for work on the outside building face and are often anchored or tied to the building, new subsections (a)(1) and (a)(2) are proposed to provide for fall protection issues unique to MCWP's. This new subsection (a)(1) for removal of the inboard guardrail on MCWP's used by glaziers, bricklayers and stonemasons prescribes a maximum allowable gap between the inboard edge of the work platform and the building of 7 inches unless approved personal fall protection systems are used in accordance with Section 1670. This provision is based on a similar provision in the Construction Safety Orders [Section 1644(a)(7)] for metal scaffolds. The 7 inch limitation is necessary because workers employed in these trades often must place very heavy units on the building wall, and the advisory committee was of the consensus that a reach in excess of 7 inches presents hazards for

workers having to lift the heavy units from the work platform to the building. The purpose and necessity is to reduce lifting and falling hazards and provide equivalent safety for glaziers, bricklayers and stonemasons, who must remove the guardrail to facilitate placement of heavy building materials on the building exterior wall and while working from an MCWP.

Subsection (a)(2).

The existing section (a) requires elevating work platforms to be equipped with guardrails or other means of fall protection. Since MCWP's are commonly used for work on the outside building face and are often anchored or tied to the building, a new subsection (a)(2) is proposed to provide for fall protection issues unique to MCWP's used by trades other than glaziers, bricklayers and stonemasons. This new subsection will permit the removal of the guardrail on the inboard edge of the work platform where the distance between the inboard edge and the building or structure wall is no more than 12 inches or when approved personal fall protection systems are used in accordance with Section 1670. This provision is based on a similar provision in the Construction Safety Orders [Section 1644(a)(7)] for metal scaffolds. The 12-inch maximum dimension is based on the maximum allowable size for a floor hole. The purpose of this amendment is to provide equivalent fall protection for workers and to prescribe safe work practices when using MCWP's for work on the building face or structure wall without an inboard guardrail. This amendment is necessary to assure worker safety for a common application of MCWP's.

Subsection (d).

The existing subsection provides that powered elevating work platforms shall have both upper and lower control devices. An exception is proposed for MCWP's that they shall only have one control device and that it shall be located on the platform. This exception was added for consistency with the ANSI/SIA consensus standard A92.9-1993, section 4.10.1, which specifies a single control location for MCWP's. The purpose and necessity for this exception is to conform control requirements for MCWP's with the national consensus standard and industry practice.

Subsection (g).

This new subsection prescribes fire safety provisions for MCWP's to include a fire extinguisher and limit the fuel supply when fuel-powered equipment is being used. Many MCWP's are fuel-powered, and work with cutting torches is often performed from MCWP's, creating a fire safety hazard to employees who may have no ready means of escape from the platform should a fire occur. The purpose of this subsection is to provide employee safety by providing a means to fight fires in-place. This is necessary since employees working on MCWP's may not have ready access to a means of escape from the platform in the event of a fire on the work platform.

Section 3646. Operating Instructions (Elevating Work Platforms).

Subsection (k).

A new subsection is proposed to specifically prohibit the use of elevating work platforms, and MCWP's as construction personnel hoists or material hoists. These devices are designed to position personnel, along with necessary tools and materials, to perform their work; they are not designed for continuous/repetitive service as vertical transportation for personnel and material, and they are not equipped with doors for use at elevator landings. The purpose of this

amendment is to assure that these devices are safely operated in a manner consistent with the design intent. The amendment is necessary as accidents have occurred when cantilevered lifts such as MCWP's have been loaded eccentrically with excessive amounts of material for vertical transportation. Accidents have also occurred when transferring material across the gap between these devices and the building.

Exception 1 for Subsection (k).

An exception is proposed for the theatrical and television motion picture industry. This industry frequently works with temporary sets and, in some cases, MCWP's and/or elevating work platforms are the only feasible way to transfer personnel, cameras, and lighting for short duration shoots. The usage is typically from the ground to one level and is within the device design parameters. This exception is similar to the existing exception provided for the motion picture industry in subsection 3646(a). The purpose of this exception is to permit the use of elevating work platforms for specialized, short duration work in the theatrical and television motion picture industry. The necessity is that in some cases in the theatrical and television motion picture industry, MCWP's and/or other types of elevating work platforms are the only feasible way to transfer personnel, cameras, and lighting for shoots on temporary sets.

Exception 2 for Subsection (k).

This exception is proposed to clarify that this subsection is not intended to prohibit the transfer of tools, materials and/or workers between the building and the elevating work platform using personal fall protection at the level where the work is being performed. The purpose of this exception is to clarify the intent of subsection (k). The necessity for this exception is to prevent misinterpretation of subsection (k) to prohibit the movement of tools, materials and workers back and forth between work platforms and the building incidental to work being performed at the interface, provided that a personal fall protection system is used.

DOCUMENTS RELIED UPON

ANSI/SIA A92.2-1990 for Vehicle-Mounted Elevating and Rotating Aerial Devices  
ANSI/SIA A92.3-1990 for Manually Propelled Elevating Aerial Platforms  
ANSI/SIA A92.5-1992 for Boom-Supported Elevating Work Platforms  
ANSI/SIA A92.6-1990 for Self-Propelled Elevating Work Platforms  
ANSI/SIA A92.7-1990 for Airline Ground Support Vehicle-Mounted Vertical Lift Devices  
ANSI/SIA A92.9-1993 for Mast-Climbing Work Platforms

These documents are available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

REASONABLE ALTERNATIVES THAT WOULD LESSEN ADVERSE ECONOMIC  
IMPACT ON SMALL BUSINESSES

No reasonable alternatives were identified by the Board and no reasonable alternatives identified by the Board or otherwise brought to its attention would lessen the impact on small businesses.

SPECIFIC TECHNOLOGY OR EQUIPMENT

This proposal will not mandate the use of specific technologies or equipment.

COST ESTIMATES OF PROPOSED ACTION

Costs or Savings to State Agencies

No costs or savings to state agencies will result as a consequence of the proposed action.

Impact on Housing Costs

The Board has made an initial determination that this proposal will not significantly affect housing costs.

Impact on Businesses

The Board has made an initial determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

Cost Impact on Private Persons or Businesses

The Board is not aware of any cost impact that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

Costs or Savings in Federal Funding to the State

The proposal will not result in costs or savings in federal funding to the state.

Costs or Savings to Local Agencies or School Districts Required to be Reimbursed

No costs to local agencies or school districts are required to be reimbursed. See explanation under "Determination of Mandate."

### Other Nondiscretionary Costs or Savings Imposed on Local Agencies

This proposal does not impose nondiscretionary costs or savings on local agencies.

### DETERMINATION OF MANDATE

The Occupational Safety and Health Standards Board has determined that the proposed standards do not impose a local mandate. Therefore, reimbursement by the state is not required pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code because the proposed amendments will not require local agencies or school districts to incur additional costs in complying with the proposal. Furthermore, these standards do not constitute a “new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution.”

The California Supreme Court has established that a “program” within the meaning of Section 6 of Article XIII B of the California Constitution is one which carries out the governmental function of providing services to the public, or which, to implement a state policy, imposes unique requirements on local governments and does not apply generally to all residents and entities in the state. (County of Los Angeles v. State of California (1987) 43 Cal.3d 46.)

These proposed standards do not require local agencies to carry out the governmental function of providing services to the public. Rather, the standards require local agencies to take certain steps to ensure the safety and health of their own employees only. Moreover, these proposed standards do not in any way require local agencies to administer the California Occupational Safety and Health program. (See City of Anaheim v. State of California (1987) 189 Cal.App.3d 1478.)

These proposed standards do not impose unique requirements on local governments. All state, local and private employers will be required to comply with the prescribed standards.

### EFFECT ON SMALL BUSINESSES

The Board has determined that the proposed amendments may affect small businesses. However, no economic impact is anticipated.

### ASSESSMENT

The adoption of the proposed amendments to these standards will neither create nor eliminate jobs in the State of California nor result in the elimination of existing businesses or create or expand businesses in the State of California.

ALTERNATIVES THAT WOULD AFFECT PRIVATE PERSONS

No reasonable alternatives have been identified by the Board or have otherwise been identified and brought to its attention that would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.